

AMENDMENTS TO THE CLAIMS:

Please amend claims 50, 51 and 52, cancel claims 55-57 without prejudice or disclaimer and add claims 74-113 as follows. This listing of claims replaces all prior versions and listings of claims in the application.

LISTING OF CLAIMS:

- 1-49. (Cancelled)
50. (Currently amended) [[A]] The method of claim 92, wherein the cell is for producing a transgenic plant, comprising introducing a satellite artificial chromosome (SATAC) into a plant protoplast; and growing the protoplast under conditions to produce a transgenic plant.
51. (currently amended) The method of claim [[51]] 50, wherein the SATAC comprises heterologous DNA that encodes a gene product.
52. (currently amended) The method of claim 51, wherein the SATAC is introduced by cell fusion, lipid-mediated transfection by a carrier system, microinjection, microcell fusion, electroporation, microprojectile bombardment, ~~nuclear transfer~~ or direct DNA transfer.
- 53.-54. (Cancelled)
55. -57. (Cancelled)
- 58.-72. (Cancelled)
73. (New) The method of claim 50, wherein the SATAC is introduced by direct DNA transfer.
74. (New) The method of claim 50, wherein the SATAC is introduced by cell fusion.
75. (New) The method of claim 50, wherein the SATAC is introduced by lipid-mediated transfection by a carrier system.
76. (New) The method of claim 50, wherein the SATAC is introduced by microinjection .
77. (New) The method of claim 50, wherein the SATAC is introduced by microcell fusion.
78. (New) The method of claim 50, wherein the SATAC is introduced by electroporation.
79. (New) The method of claim 50, wherein the SATAC is introduced by microprojectile bombardment.

80. (New) The method of claim 51, wherein the SATAC is introduced by direct DNA transfer.

81. (New) The method of claim 51, wherein the SATAC is introduced by cell fusion.

82. (New) The method of claim 51, wherein the SATAC is introduced by lipid-mediated transfection by a carrier system.

83. (New) The method of claim 51, wherein the SATAC is introduced by microinjection.

84. (New) The method of claim 51, wherein the SATAC is introduced by microcell fusion.

85. (New) The method of claim 51, wherein the SATAC is introduced by electroporation.

86. (New) The method of claim 51, wherein the SATAC is introduced by microprojectile bombardment.

87. (New) The method of claim 51, wherein the gene product confers disease resistance to the transgenic plant.

88. (New) The method of claim 50, wherein the plant protoplast is selected from a monocot, a dicot and an algae.

89. (New) The method of claim 88, wherein the plant protoplast is selected from tobacco, tomato, potato, petunia, wheat, rice, maize, rice, rye, cotton, soybean, *Brassica napus*, and lettuce.

90. (New) The method of claim 51, wherein the plant protoplast is selected from a monocot, a dicot and an algae.

91. (New) The method of claim 90, wherein the plant protoplast is selected from tobacco, tomato, potato, petunia, wheat, rice, maize, rice, rye, cotton, soybean, *Brassica napus*, and lettuce.

92. (New) A method for producing a transgenic plant, comprising introducing a satellite artificial chromosome (SATAC) into a plant cell; and
growing the plant cell under conditions to produce a transgenic plant.

93. (New) The method of claim 92, wherein the plant cell is contained in a plant organ or embryoid.

94. (New) The method of claim 92, wherein the plant cell is selected from tobacco, tomato, potato, petunia, wheat, rice, maize, rice, rye, cotton, soybean, *Brassica napus*, and lettuce.
95. (New) The method of claim 92, wherein the SATAC comprises heterologous DNA.
96. (New) The method of claim 95, wherein the heterologous DNA encodes a gene product.
97. (New) The method of claim 96, wherein the gene product confers disease resistance to the transgenic plant.
98. (New) The method of claim 95, wherein the plant cell is selected from a monocot, a dicot and an algae.
99. (New) The method of claim 95, wherein the plant cell is selected from tobacco, tomato, potato, petunia, wheat, rice, maize, rice, rye, cotton, soybean, *Brassica napus*, and lettuce.
100. (New) The method of claim 92, wherein the SATAC is introduced by direct DNA transfer.
101. (New) The method of claim 92, wherein the SATAC is introduced by cell fusion.
102. (New) The method of claim 92, wherein the SATAC is introduced by lipid-mediated transfection by a carrier system.
103. (New) The method of claim 92, wherein the SATAC is introduced by microinjection .
104. (New) The method of claim 92, wherein the SATAC is introduced by microcell fusion.
105. (New) The method of claim 92, wherein the SATAC is introduced by electroporation.
106. (New) The method of claim 92, wherein the SATAC is introduced by microprojectile bombardment.
107. (New) The method of claim 95, wherein the SATAC is introduced by direct DNA transfer.
108. (New) The method of claim 95, wherein the SATAC is introduced by cell fusion.

109. (New) The method of claim 95, wherein the SATAC is introduced by lipid-mediated transfection by a carrier system.

110. (New) The method of claim 95, wherein the SATAC is introduced by microinjection.

111. (New) The method of claim 95, wherein the SATAC is introduced by microcell fusion.

112. (New) The method of claim 95, wherein the SATAC is introduced by electroporation.

113. (New) The method of claim 95, wherein the SATAC is introduced by microprojectile bombardment.